

LISTing Newsletter

Newsletter of the Long Island
Sinclair/Timex Users Group

Next Meeting

FEB 12th 1995



Listing Policy

Annual Dues \$16.00

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PLEASE SEND SUBMISSIONS TO:

LISTING
 MR. FREDERIC STERN
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COMING EVENTS:

FEB. 12, 1995 LIST MEETING.

 SPECIAL NOTICE

THE NEXT MEETING WILL BE HELD AT
 HARVEYS HOME;
 5 PERI LANE
 VALLEY STREAM, N.Y.

MEETING MINUTES

 REPORTED BY: FRED STERN.
 JAN. 08, 1995

 THE MEETING WAS CALLED TO ORDER
 BY HARVEY AT 2:00PM

IN THE MAIL WE RECEIVED 1 COR-
 RESPONENT, AND 4 RENEWALS.

WE WERE HAPPY TO SEE STEVE KAY
 AND JOHN PAZMINO IN ATTENDANCE.

HARVEY DISCUSSED THE STATE OF
 LIST IN THE UP-COMING YEAR. WITH
 DECLINE IN SUPPORT FOR TIMEX/
 SINCLAIR COMPUTERS AND DECLINE
 IN LIST MEMBERSHIP, THIS WILL BE
 A CRITICAL PERIOD FOR LIST. WE
 HOPE TO PICK-UP A FEW NEW MEM-
 BERS FROM OTHER DISBANDED USER
 GROUPS. WE ARE ALSO TRYING TO
 FIND T/S SUPPORT WHICH MAY STILL
 EXIST IN EUROPE, ASIA AND SOUTH
 OF THE BORDER.

BOB GILDER REPORTED THAT THEIR
 WILL BE A OL SHOW IN TENNESSEE
 THIS JUNE. WE WILL REPORT
 DETAILS AS WE RECEIVE THEM.

A ROUNDTABLE DISCUSSION WAS
 HELD ON SOURCES FOR REPLACEMENT
 INK RIBBONS FOR OLD PRINTERS.

A SECOND ROUNDTABLE WAS HELD
 REGARDING THE DIFFERENCES BET-
 WEEN THE TS2068 AND THE TC2068.

CLASSIFIEDS

 THIS CLASSIFIED SECTION IS
 AVAILABLE TO ALL LIST MEMBERS
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 IT IS TO BE USED ONLY FOR THE
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THE FOLLOWING PUBLICATIONS ARE
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ZX-81/TS1000 TECHNICAL TIDBITS
 TECHNICAL TIDBITS PART II
 SAVINGS AND LOAD OF THE TIMEX
 COMPUTER
 \$4.00 EACH.

FOR SALE: TIMEX PRINTER PAPER,
 3 ROLLS - \$5.00+ POSTAGE.
 CONTACT: FRED STERN 516-737-0963
 EVENINGS AND WEEKENDS.

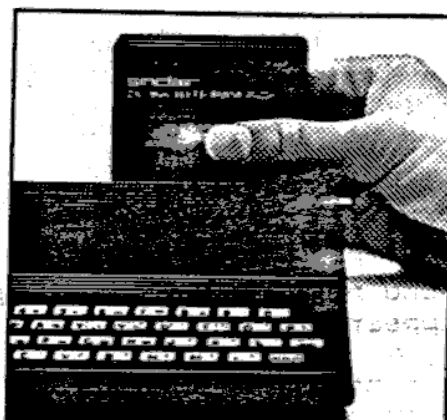
A FINAL WORD

 MY NAME IS FRED STERN AND I AM
 THE EDITOR OF THIS EDITION OF
 LISTING.

A NEW YEAR HAS STARTED. WHAT
 CAN YOU DO TO MAKE IT A BETTER
 TIMEX YEAR? HOW ABOUT WRITING
 AN ARTICLE FOR THIS NEWSLETTER.
 TRY IT, YOU MAY LIKE IT.

THANK YOUS TO BOB GILDER FOR THE
 GREAT JOB HE IS DOING AND TO
 HARVEY FOR THE USE OF HIS HOME.

SEE YOU ALL AT THE NEXT MEETING.



SMSQ/E is looking good...thanks to Bob Dyl of IQLR, who came to my rescue for ALTKEY operation in this New Operating System. Bob read my plea for help in the last issue of LIST and he immediately telephoned Jochen Merz in Germany for the solution for this particular problem. Jochen told Bob what all we have to do is type in 'HOT_LOAD' in the SMSQ BOOT file and the ALTKEYs will operate. Bob called me with this information and it worked. Why wasn't this in the manual? Well I will venture a guess....the author assumed that all users of SMSQ know all there is to know about the Pointer System. Most software writers tend to prepare manuals for the same level of competence that they are on. Any how, the system is now up and running to my satisfaction.

There is an added benefit when using The Editor SE with SMSQ; the screen appears to be brighter and the character set appears on the monitor screen to be larger than normal. When I Boot up the Editor within SuperBASIC the characters are much smaller than in SMSQ. Why, I really don't know?

While on the subject of software, several LIST members including myself have found that several months before the end of 1994, TASKMASTER insisted on updating the date and time, regardless of how many times during the same day TASKMASTER has been Booted up! We were used to skipping this initialization process because the Gold Card and Super Gold Card have their own 'Real-time clock' and TASKMASTER obliged us by accepting that time and date. No doubt, we have been spoiled! Bob Malloy suggested that perhaps, the program had been set up with October or November 1944 final date. If any one within our reading range can come up with a fix for this problem, quite a few QL users would be very grateful for a solution to an annoying problem.

I've been using DP's Perfection Plus SE wordprocessor for the past month just to get the feel of it and as yet, I have not had an occasion to use it seriously. It is quite obvious to me that Perfection has quite a few of the same 'traits' as The EDITOR SE has. Three manuals support Perfection; Perfection Word Processor manual, The Perfection SE upgrade manual and the Perfection Spellchecker manual. I printed out all of the manuals back-to-back using The Editor.

The Perfection Printer_data file allows the user to key in 64 additional printer translates, even though there are 13 Epson compatible translates on file: Underline on/off, Italics on/off, Bold on/off Superscript on/off and Subscript on/off as well as end of line and a few more. There are eight additional slots for Strip strings which appear to provide Highlights for your text. I haven't tried these as yet. I added 26 additional translates to the printer driver using a CTRL/Shift character for embedding the code sequence within text.

For example, the combination of CTRL/SHIFT/Q (ASCII 177) prints a 'PI' symbol on the screen. This key combination represents Letter Quality print. When you want to modify a printer driver, LRUN the Perfection BOOT. A menu will appear at the bottom of the screen - enter '6' for the printer driver program. Within a few seconds the program requests the drive number of the current printer driver. After entering the device name, it then requests if the printer driver is PRINTER_DATA or another name. If you are using the default printer driver, then press 'Enter' or if your printer driver name is different, then enter the name of the printer driver and press 'Enter'. Within a few seconds the printer driver appears on the screen.

To enter a new translate, press F5 for the 2nd screen, then press F2 and scroll down the translate area until you are at a numbered line without any code, and press ENTER. The entire translate for Letter Quality is entered as: CTRL/SHIFT/Q,&27,x,&1 ENTER. The 'PI' character and all other numbers are displayed on that particular Translate line. Note that the ampersand character indicates numerical characters and the comma is a delimiter between each segment

of the translate. Letters are accepted without the ampersand. Entering printer translates is much easier than it was setting up translates for Quill.

On completion of entering translates into the PRINTER_DATA program, press 'ESC' another menu appears requesting a numerical input, such as '2' or '5'. '2' for overwriting the old file and saving the new data or '5' to ESCape the program. The Printer driver program multi-tasks with any other program you may currently have in memory, so that if you have to gather information from another program, you can enter 'CTRL/C' and go back and forth.

Incidentally, Perfection has an Italic, Superscript and Subscript character set fonts on the program disk! If you select either of these fonts during a writing session with Perfection, all characters will appear as they will be printed on paper: If you select Italics ON, all text will appear slanted on the screen until you select Italics OFF, and the same with Superscript and Subscript.

Pressing F1 displays the HELP Screen. The HELP screen is a 'JOY' to behold! Lots of information appears on the screen and instead of pressing Enter for additional screens, you may either use the 'Down' cursor key to scroll through the full length of the Help file or you may Page Down the file using the combination of 'ALT/SHIFT/Down or Up' Cursor keys. As the Help file is scrolled, it will display an enormous amount of MACROS for just about any of the 'F3' commands.

It take a little time to get used to Perfection, however, it is worth it! As I stated earlier, if you have experience with The Editor, then this word processor will be a 'cinch' to get going.

I have just received the latest Mechanical Affinity, 14 page catalog and it is chocked full of QL goodies. If you have been thinking about a purchasing a program and have been turned off about currency exchange for the purchase; Frank and Carol Davis most likely has this software package in stock - all you have to do is order it and send a check for the amount specified in their catalog. Incidentally, the price of any item that Mechanical Affinity sells, includes postage and packing.

On page three of the Mechanical Affinity catalog, I noticed that they are selling NEW Z88 (lap top) computers, complete with new manuals, carrying case, and a 128K extra RAM Pack for \$230.00 US. The Z88 comes with a built-in word processor, database, diary, comms facility, an Eprom cartridge slot and built-in Eprom burner to save programs on Eprom. It is expandible with two additional RAM slots.

Well, you might of guessed it! I decided to purchase the Z88 package with a QL-Z88 cable and the QLINK QL-Z88 software. I have been thinking about the Z88 for some time, and thought about the Z88 being an extension for the QL computers. Since I've been retired, I spend several hours a day reading on my front porch with my trusty companion 'Gillie', my dog. I usually have a pad and pen handy for jotting down thoughts on paper while reading the newspaper or magazines and books. Now when my Z88 arrives, it will take the place of paper written notes and at the end of the day, I will be able to transfer text from the Z88 to the QL. I also like the idea that Eproms can be used for permanent data. I am not sure if the Eprom is socketed or soldered to the cartridge. However I am sure when the time comes to order an Eprom cartridge for the Z88 I will have the necessary information that I need.

If you have not received a catalog from Mechanical Affinity, why not write to them for a copy. And if you do request the catalog and you are not sure about purchasing anything at the moment, why not include a couple of postage stamps to help defray the cost mailing the catalog. MECHANICAL AFFINITY, c/o Frank Davis, 513 EAST MAIN Street, PERU, INDIANA 46970 Telephone: 317-473-8031 or sent to: MECHANICAL AFFINITY, c/o Pual Holmgren, 5213 WILTON WOOD Road, INDIANAPOLIS, INDIANA 46254 Tel: 317-291-6002.

Hi Res Graphics

Tom Knyszek

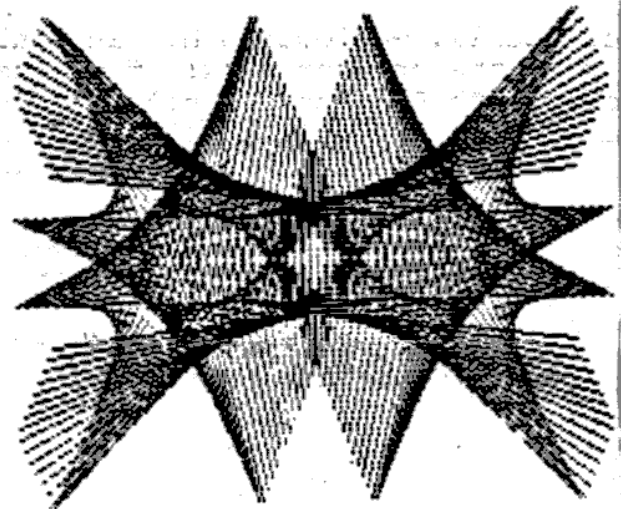
T52065 T52065 T52065

HI HI-RES ADDICTS! Many of you have asked for a program that will give you moving and ever changing HI-RES display. Well, this program will keep going for hours with many hundreds of pleasing displays. The RANDOM number generators in lines 70 to 110 accomplish the random patterns and the PLOT and DRAW commands in lines 180 to 195 keeps everything symmetrical.

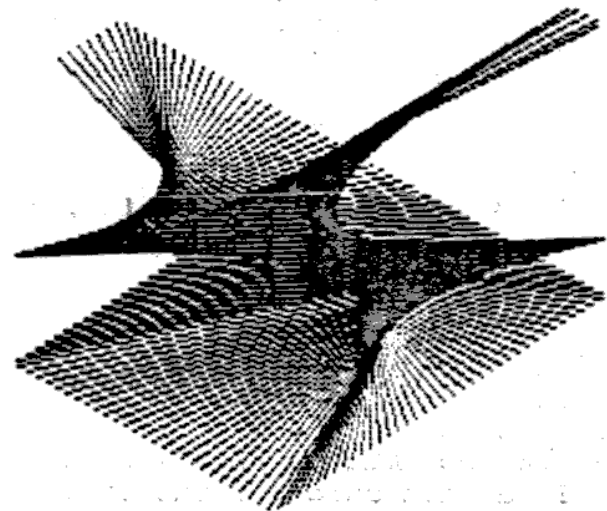
Have FUN !!

```

5 REM Converted from TRS-80
  to T5-2065 By Ted Knyszek
10 REM "symmetry-1"
20 LET c=1
30 LET bc=1: LET xf=255: LET yf=175
40 LET n0=0: LET n1=1
50 LET xc=255: LET yb=175
60 LET i1=8
70 LET n=INT (RND*150)+10
80 LET x=INT (RND*xc)-n1: LET
y=INT (RND*yb)-n1
90 LET x1=INT (RND*xc)-n1: LET
y1=INT (RND*yb)-n1
100 LET i1=INT INT (RND*i1)-n1
LET i2=INT (RND*i1)-n1
110 LET i3=INT (RND*i1)-n1: LET
i4=INT (RND*i1)-n1
120 GO TO 180
125 LET x=x+i1: IF x>=xc OR x<=
n0 THEN LET i1=-i1: LET x=x+i1
130 LET y=y+i2: IF y>=yb OR y<=
n0 THEN LET i2=-i2: LET y=y+i2
135 LET x1=x1+i3: IF x1>=xc OR
x1<=n0 THEN LET i3=-i3: LET x1=x
1+i3
140 LET y1=y1+i4: IF y1>=yb OR
y1<=n0 THEN LET i4=-i4: LET y1=y
1+i4
150 IF n<>n0 THEN LET n=n-n1: G
O TO 120
180 PLOT x,y: DRAW (x1-x),(y1-y)
185 PLOT (xf-x),y: DRAW ((xf-x1)
)-(xf-x)),(y1-y)
190 PLOT x,(yf-y): DRAW (x1-x),
(yf-y1)-(yf-y))
195 PLOT (xf-x),(yf-y): DRAW ((
xf-x1)-(xf-x)),((yf-y1)-(yf-y))
200 LET c=c+1: IF c>=100 THEN C
LS GO TO 20
210 GO TO 125
  
```



Well if you get tired of SYMMETRY, you can make a few small changes in the above program and come up with hundreds of moving ABSTRACT patterns like the one shown below. Eliminate Lines 185, 190, and 195. In Line 200 change IF c>=100 to IF c>=200.



Ted Knyszek
11611 Blossom Ave.
Parma heights, OH 44130 CTM

Back-up

D N Venamore,
Burgess Hill,
Sussex.

TE1000

ZX-81

THIS COPIER for the 16K ZX-81 will duplicate any program up to 15K long including those which cannot be Saved by the normal routine.

The program is a modified version of the ZX-81 Load and Save routines and comprises 128 bytes of machine code and a supporting "no-frills" Basic program. It fits into 1K with a little to spare.

The program to be copied is loaded above RAMtop, from where it can be saved as required.

Before typing in anything,

POKE 16389,72

and New. This sets RAMtop to 18432, which allows sufficient space to enter and edit the program, but is low enough to collapse the Display File. If this is not done the expanded Display File will be saved with your completed program, making it too long to

Load into the 1K finally allocated for it.

Load or type in your favourite hex loader and create a Line 1 Rem statement with 128 characters of your choice.

If your hex loader starts at Line 10,

POKE 16419,10

If not create a dummy Line 10 — 10 Rem will do — and then

POKE 16419,10

Load the machine code — listing 1 — into the Rem statement and check it. Note that the first two bytes of machine code prevent the rest of the machine code listing in the Rem statement.

When the machine code is loaded in,

POKE 16510,10

The Rem statement should now be Line 0. This cannot be accidentally deleted.

Now delete all lines excepting Line 0 and 10, and enter the remainder of the program — listing 2 — overwriting the previous line 10.

Save the program a couple of times before proceeding.

The program in the computer cannot be Run in its present state because RAMtop is too high.

It is necessary then to clear the program from memory, reset RAMtop to 17408 and reload the program.

I prefer to set RAMtop using the short program in listing 3.

I keep this on tape in front of the Copy program with approx. 10 secs of tape running between them.

Whichever you prefer, enter New. Set RAMtop using the RAMtop program or

POKE 16389,68

Now reload Copy and run it.

The first prompt asks for the name of the program to be copied. Note that the name is not used to find the named program on the tape.

After entering the name and Newline, the next prompt appears, "Start Tape the New Line".

Audibly monitor the program to be copied and locate the start of the 5 second silent period which precedes the program proper. Stop the tape there. Then with the recorder set for Load, start the tape and press Newline immediately.

When the program is Loaded, the prompt

"Loaded-Start Blank Tape then Newline to Save" appears. Place a clean tape in the recorder set for Save, run tape and press Newline.

When the program has Saved, the option to take further copies is presented. The Break key may be used to abort both Load and Save routines.

After Break, Run will return you to the Load routine. Goto 180 will return you to the Save routine.

LIST 1 HEX DUMP

```
16514: 76 76 21 00 44 0E 01 3E
16522: 7F 0B FE 03 FF 1F 00 17
16530: 17 38 02 18 F2 1E 94 06
16538: 1A 10 DB FE 17 CB 7B 7B
16546: 38 F5 10 F5 20 04 FE 55
16554: 30 D0 3F CB 11 30 D0 71
16562: CD B7 40 18 D0 23 E8 2A
16570: 00 00 01 00 00 09 37 ED
16578: 52 E8 D0 E1 C9 11 CB 12
16586: CD 46 0F 30 27 10 FE 10
16594: 7A B3 20 F4 21 00 44 CD
16602: E1 40 CD B7 40 10 F0 0E
16610: 37 CB 13 CB 9F E0 05 0E
16618: 04 4F D3 FF 06 23 10 7E
16626: CD 46 0F 30 27 10 FE 10
16634: 0D 20 EF A7 10 F0 10 E1
```

LIST 2 "COPY"

```
0 REM -128 CHARACTERS-
10 PRINT "ENTER NAME OF PROG."
20 INPUT A$
30 LET X=17419+LEN A$
40 POKE X+1,69
50 LET Y=X-16404
60 RAND X
70 POKE 16570,PEEK 16434
80 POKE 16571,PEEK 16435
90 RAND Y
100 POKE 16573,PEEK 16434
110 POKE 16574,PEEK 16435
120 PRINT "START TAPE THEN N/L"
130 INPUT D$
140 CLS
```

```
160 FAST
170 RAND USA 16516
180 PRINT "LOADED",,"START BLAN
K TAPE THEN N/L TO "SAVE"
190 INPUT D$
200 RAND USA 16589
210 CLS
220 PRINT "DONE:-ANOTHER COPY ?
230 INPUT D$
240 IF D$="Y" THEN GOTO 180
250 SLOW
```

LIST 3 "RAMTOP"

```
5 REM "RAMTOP"
10 RAND 17408
20 POKE 16388,PEEK 16434
30 POKE 16389,PEEK 16435
40 PRINT "RAMTOP NOW SET TO ";
PEEK 16388+256*PEEK 16389
50 PRINT AT 2,0;"
60 FOR N=1 TO 6
70 NEXT N
80 PRINT AT 2,0;"STOP TAPE"
90 FOR N=1 TO 6
100 NEXT N
110 PRINT AT 4,0;"PRESS ANY KEY
TO CONTINUE",,"THEN LOAD ""COP
Y""
120 IF INKEY$="" THEN GOTO 50
130 NEW
140 SAVE "RAMTOP"
150 GOTO 10
```

PARALLEL TO SERIAL INTERFACE

Interface a Centronics parallel output to an RS232 serial printer.

R. L. L. Hu

If you built your computer system using boards and peripherals from different manufacturers, you have probably experienced the frustrations and confusion of mixing and matching interfaces. This project meets the real need to interface a Centronics parallel output to an RS232 serial printer.

How the circuit works

Refer to the schematic diagram, Figure 1. Parallel data from the printer controller is loaded into IC1, a 74LS165 shift register by the STROBE signal if the BUSY line is low. This STROBE signal also clears IC2, a 74LS161 binary counter and presents IC3-a, a 74LS74 flip-flop. On the positive edge of the STROBE pulse, IC3-b is

clocked and the BUSY line to the printer controller goes high. Since most parallel interfaces found today use only the STROBE1 and BUSY lines for handshaking, the ACK signal was not implemented in this design. The BUSY line will be kept high for a minimum of 10 clock cycles for each byte transferred. During this interval, the parallel data loaded will be clocked out serially through IC3-a: first the start bit, then followed by 7 data bits and ending with 2 stop bits (total of 10 bits). The

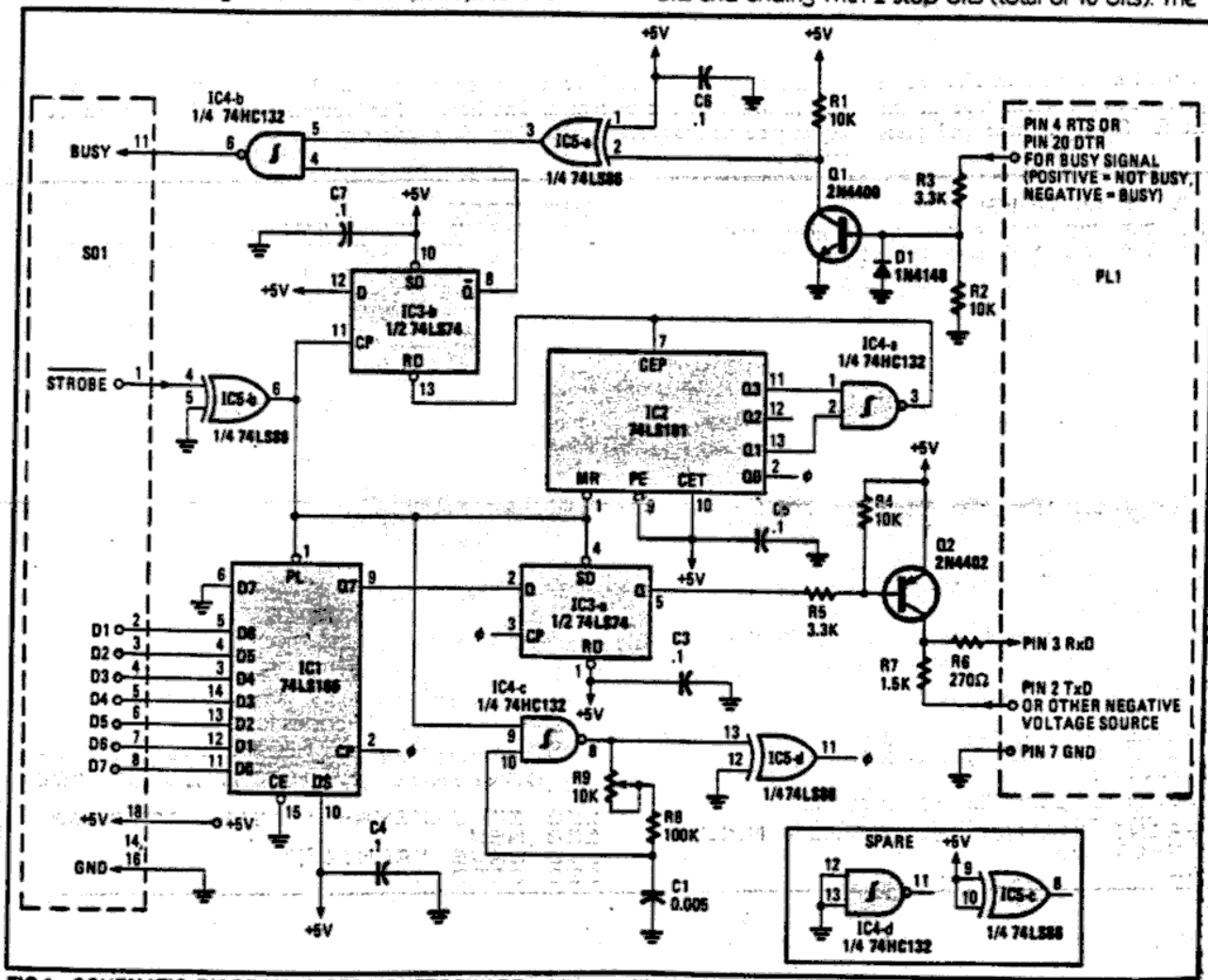
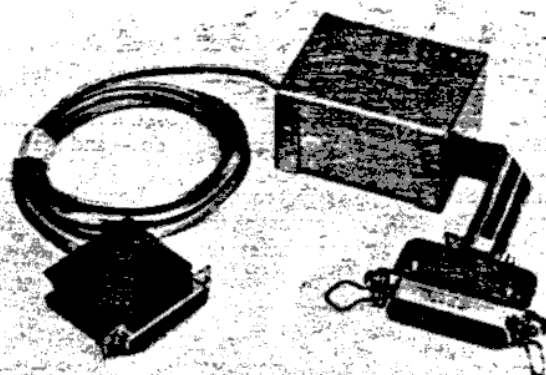


FIG.1—SCHEMATIC DIAGRAM IS STRAIGHTFORWARD with no critical wiring. Author used wire-wrap method, on ordinary perfboard. For better understanding, refer to the schematic while reading "How it works" section.

BUSY line can also be held high by the serial printer if the printer buffer becomes full, that holds off any further data transfer from the printer controller. Many serial printers use either pin 4 (RTS Request To Send) or pin 20 (DTR Data Terminal Ready) to signal this buffer-full condition.

To keep the overall parts count low, the 74HC132 (high-speed CMOS) Schmitt-trigger was used for IC4. That IC lends itself well to operating as an oscillator simply with the addition of a resistor and a capacitor. The oscillator runs at 2400 Hz or 2400 baud with the values of R and C shown.

Since the STROBE pulses occur asynchronously (when the BUSY line is low), it is possible to have the positive edge of a clock pulse arrive just at the instant the STROBE pulse goes high. Unfortunately, that would result in an unpredictable outcome. However, with the clock circuit shown, which is not the same as gating the output of the oscillator, a setup time is ensured between the last STROBE pulse and the next clock pulse. Pull-up resistors were not used in interfacing LS TTL to this CMOS, since with CMOS gates as the only load on the LS TTL outputs, the LS TTL outputs will generally rise up to one V_{be} below V_{cc} .

Transistors Q1 and Q2 serve as voltage translators, and diode D1 keeps the base of Q1 from going into negative or reverse breakdown.

Construction.

The layout of the components is not critical. The prototype was built using wirewrap technique. The RS232 receiver and driver components were all mounted on a single 16-pin component header and plugged into a wirewrap socket. The whole circuit board fits into a small chassis box (Radio Shack 270-235), with one end of the box for the parallel interface connections and the other end for the RS232 interface connections. It is best to keep the parallel interface cable short and extend the RS232 interface cable to the length desired.

Do not substitute the 74HC132 with 74LS00, unless you plan to design your own oscillator. The baud rate of this interface board can be changed to suit your printer or your inclination. However, not much can be gained by running at a baud rate greater than 2400, unless you have a very fast printer (240cps) or a print spooler, since data transfer occurs concurrently with printing anyway.

Note that some serial printers use an active-low BUSY signal, in which case, pin 1 of IC5 should be tied to ground instead of V_{cc} .

Powering-up the interface

The 5-volt supply needed to run this board can usually be obtained from the Centronics end of the interface. Check your printer controller documentation to see if it is available at one of the connector pins. If not, it would be a simple matter to install a jumper from the 5-volt source on the printer controller board to one of the connector pins. The negative supply (-9, -12, -15V, etc.) may be obtainable from the serial printer end of the interface. Check the documentation for the

printer; if pin 2 (Tx Data Transmitted Data) is unused and remains at a negative RS232 voltage level when operating, then it may be usable as the negative voltage source to drive the Rx Data (Received Data) line.

Apply power to the interface board. Check and adjust VRI for oscillator frequency of 2400 Hz. This frequency does not have to be accurate, since each start bit synchronizes the receiver clock of the UART/ACIA in the printer. Timing errors are non-cumulative.

Troubleshooting.

If the printer prints the correct character each time, then the baud rate is set correctly. If you get garbage, check the baud rate. Now try writing a string of characters to the printer. If the printer worked in the single character mode but now it prints garbage, check and make sure the number of data bits, parity bit and

PARTS LIST

Resistors

R1, R2, R4—10,000 ohms

R3, R5—3300 ohms

R6—270 ohms

R7—1500 ohms

R8—100,000 ohms

R9—10,000 ohm, 10-turn potentiometer

Capacitors

C1—0.005uF

C2-C6—0.1uF

Semiconductors

IC1—74LS165 shift register

IC2—74LS161 counter

IC3—74LS74 flip-flop

IC4—74HC132 Schmitt trigger

IC5—74LS86 quad OR gate

Q1—2N4400 transistor

Q2—2N4402 transistor

D1—1N4148 diode

stop bits on the printer are set as follows: 7 data bits, no parity bit and 2 stop bits, which is the same as setting for 7 data bits, mark parity bit and 1 stop bit.

The number of stop bits sent by the interface board can be increased from 2 to 4, if your printer lacks the flexibility in data format settings, by simply moving the wire from Q1 to Q2 on IC2.

If the printer prints okay initially, but starts to drop characters after a while, it is likely that the printer buffer overflowed due to improper handshaking. Check the busy line from the printer to the printer controller. If the problem is still not resolved, set up a scope loop by disconnecting the printer and issuing continuous print commands, remembering to tie up or down, depending on your particular printer, to the printer busy line. Now is a good time to pause and reflect, before you become too deeply involved in troubleshooting, on a couple of things which should have been verified before hooking up the interface: that the Centronics controller itself works, and that the RS232 printer itself works also. This interface has been tested and used with Cromenco printer controller board, Heathkit H14 dot-matrix printer (256-character buffer) and Smith Corona TPI serial daisy wheel printer (32-character buffer). Both have been working. ◀▶

OSCAR ON FORTH

Oscar Sensabaugh



Well, this here is gonna be the First Annual Forth Column. Whatever month Old Chet gets around to printin it, same month next year will be the time to look fer the Second Annual etc., assumin I last that long and learn enought FORTH in the meantime to make it worth the effort.

First off, I got some advice to lay on ya. Do not, repeat,

DO NOT read no books on FORTH until you got a FORTH kernel loaded into your system. Then, and only then, get your librarian to borrowin books on the subject so you can find out which ones you want to buy fer your permaent library.

That's my advice, take it or leave it. What happened was, FORTH started out with good intentions of transportability, standardization, and such. Then it went though a few committees, got manhandled by more than several wildcat programmers, and now comes in just dang near the same number of versions, dialects, and spinoffs as any other computer lingo. I aint even seen the latest "standard", FORTH '83, and I aint so dang shure I even want to. The committee that set it up, according to what little I have read on the subject, done went and deleted stuff I was beginnin to feel comfortable with, added a batch of stuff I aint so dang certain I will ever understand, and probably burried the last shreds of compatiability, etc. That's my opinion here and now. Maybe I could be persuaded over to the other side of the fence by a good TYPE '83 FORTH fer the TIMEX machines, but only if it had a good users manual in tow.

Meanwhile, back in the jungle, us Timex Freaks that have enough curiosity to get involved, and a highly developed sense of the ridiculous parts of life, can do some explorin. May even find somethin we like, but stash a few Nerf toys along the trail, they can be thrown without damage, while computers have been know to break windows, etc.

I read some of the recommended books first, and they (almost) made sense, or at least seemed logical. So I took the plunge. I ordered the first of what was to be several FORTH:

XFORTH for the *Sinclair ZX-81* *Timex T/S 1000*

(c) 1983 by M. Peake/A. Oscroft,

Exclusive distribution by HAWG WILD Soft-

ware.

(ifren you don't know their address by now, you aint reading CTM properly)

Well, I loaded up XFORTH and found out right rapid like that I didn't remember as much of Brodie, Scanlon, et al, as I thought I did. Remember, A FORTH "word" can be any dang thing you can enter, and a FORTH program can execute in just about the time it takes to call its name! I give my favorite librarian a hurry-up call for ANY book on FORTH, and while waitin I kept tryin. Musta done Brodies "LARGE-F" a thousand times, it being the example given in the XFORTH manual.

I didn't dream up any world-shakin programs durin the time I was waitin fer the books to come in, but I did develop an instinct fer usin the "ABORT" command in time to keep EVERYTHING from flyin off into the wild blue yonder, leavin a empty RAM and a full boob tube.

Just before I committed suicide, some of the books started comin in, and best of all, HAWG WILD started publishing the XFORTH XCHANGE where users could ask questions and get answers. I got several of the latter out of the first issue. XFORTH XCHANGE still shows up on its unscheduled schedule, and now is showing support for other FORTH programs. Just today I did a fix from XFORTH XCHANGE on a fig-but we will get to that later, but I better mention right now that "XFORTH XCHANGE" is FREE to the purchaser of ANY FORTH KERNAL from HAWG WILD, and aint available to nobody else at any price. This here is a EXCLUSIVE Newsletter!

To summarize on XFORTH, it is a FORTH '79 sub-set customized to the ZX-81 family. It may be a bit difficult for the FORTH novice to master, FORTH "words" in the kernel often being more compatible with the Timex keyboard than with Brodie, Scanlon, et al. A seasoned FORTH programmer can probably do amazing things with it.

I gotta add in another 2-bits worth of comment here. I been gettin FORTH DIMENSIONS, DR. DOBBS JOURNAL, BYTE, and others. They got plenty on FORTH, but most of them forgot there is small systems like Timex out here in the boondocks. So efforts like HAWG WILDs XFORTH XCHANGE are important to us, also any similiar publications for other small systems. Such publications really do depend on input from the average user. "Joe Average" may not be able to fix nothing, but when he inputs the problem where maybe somebody else already knows, or can dream up a fix, "Joe" has started somethin that many can benefit from.

So on th the next FORTH:

(C) 1984 by E.A. Worden

Excusive distribution same as above

(Manual includes Editor User Guide by Bill Stoddart of FORTH Interest Group, United Kingdom)

I aint had a chance to check this out at the source, but my 2068 FIG-FORTH Manual says, "RELEASE 2.26" but the tape logs on as 1.1d. Anyhow, it works great... with a couple or three minor reservations I'll get too later. Just like the 2068 is more elaborate than the 1000, so is 2068 FIG FORTH more elaborate than XFORNTH. The two could be better described as "cousins" than as brothers, there being significant differences in FIG-FORTH and FORTH '79 standards.

The 2068 FIG-FORTH manual is very well arranged. The first section gives loading instructions, a few miscellaneous operating notes and lists a few non-standard "words". Next section contains a FIG-FORTH GLOSSARY which is followed by Bill Stoddards brief but well written Editor User Manual. This in turn is followed by an Editor Glossary. While I would prefer an expanded manual with a section of working examples, something more helpful to a novice, the existing manual is adequate for one with a bit of FORTH experience. (I was able to use it, wasn't I?)

The program has excellent stability. Screen I/O had seemed a bit slow (for FORTH, that is), but I had not complained. Someone else did, however, and Ed Wordens fix appeared in the current XFORNTH XCHANGE. That's the fix I mentioned earlier in the column, and it does speed up things with no apparent ill effects in the stability department, thus taking care of one of the above mentioned reservations.

I aint goin to admit (yet) that "FORTH" and "friendly" belong in the same sentence. Face it, all FORTH is real picky about input being all prim and proper, and it is dang easy to miss a space or get a double strike with a hangin key on the unmodified 2068. But ifen FORTH could be rated on the 1-to-10 friendly scale, I'd give this one about a 6 or so. Although I don't get a prompt on the load-screen command, the screens load ok. (That was another one of the "reservations") Fact is, I had no problems with the usual commands, just followed the book and things came out right.

I reckon the only real villian in this story is that blank-blank cotton pickin cursor. Trying to delete and type over a goofed line sometimes looks good on-screen, but when you enter the corrected line it comes back to you with some cursors that had hid out, plus, of course that famous question mark which FORTH uses as shorthand for "What is this supposed to mean, stupid?".

Oh well, on to another FORTH:

ABERSOFT FORTH for TIMEX 2068
(c) ABERSOFT 1984

HAWG WILD scores again!

I got to admit, this little fig could

turn out to be my favorite! It is a conversion from SPECTRUM, and very well done, even if the little manual does say "Spectrum" now and then instead of "Timex". I believe this one would be easier for the novice to learn, as it already has more of the Timex commands installed, plus its own set of report (error) codes. The manual is almost too small, although it is crammed with information, including graphics and mention of the Micro-Drives, which may get here yet!

The temptation to go into a direct point-by-point comparison of these two 2068 FIG-FORTHS is almost irresistible, but I believe it would be pointless. Both are powerful FORTHS. While ABERSOFT may not be as "full" a fig, it is ahead in the "Non-Standard" (Timex) department, making it "friendlier" at least for the novice. The more experienced FORTH user might prefer to take Wordens 2068 FIG-FORTH and add his own graphics bits to the vocabulary. More can be added to either program, understand! That's the beauty of FORTH, take your kernel, whatever it may be, and do unto it whatever you and your memory are big enough and smart enough to do!

One small gripe at ABERSOFT: Is that awkward routine for saving ones extensions really necessary?

And another gripe of a general nature: although these last two FORTHS are both figs, I'll lay you odds dang few programs are directly transportable between them without a batch of patchwork. So much for committees and standards in the computer world of today! On the other hand, who wants to live in a world of clones of clones?

Threes on ya all!

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